

We claim:

1. A method of collecting information related to RFID tags associated with items of interest, comprising the steps of:

5 (a) selecting a category of items using a user interface associated with an RFID reader;

(b) using the RFID reader to interrogate at least one RFID tag associated with an item of interest; and

10 (c) associating information related to the at least one item with the selected category.

2. The method of claim 1, wherein the method further includes the step of:

(d) saving the categorized information in a database.

15 3. The method of claim 2, wherein step (a) comprises selecting a category from among a list of categories displayed on the user interface.

4. The method of claim 2, wherein step (a) comprising selecting a category and designating the attributes of items in that category to define the category.

20 5. The method of claim 2, wherein the category describes a location where an item was interrogated.

6. The method of claim 2, wherein the category describes a class of items.

25 7. The method of claim 2, wherein categories from which a user may select are uploaded from a data storage device and displayed on the user interface.

8. A method of interrogating RFID tags associated with items of interest, comprising the steps of:

30 (a) selecting at least two categories of items using a user interface associated with an RFID reader;

(b) using the RFID reader to interrogate at least one RFID tag associated with an item of interest; and

(c) categorizing information related to the at least one item(s) associated with the interrogated RFID tag(s) in at least one of the categories.

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9. The method of claim 8, wherein the method further includes the step of:

(d) saving the categorized information in a database.

10. The method of claim 9, wherein the categories are mutually exclusive.

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11. The method of claim 9, wherein the categories are not mutually exclusive.

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12. The method of claim 9, wherein one category describes whether an item is present in a storage area.

13. The method of claim 9, wherein the categories describe different types of items.

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14. The method of claim 9, wherein information necessary to categorize each RFID-tagged item may be obtained from the RFID tag itself.

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15. The method of claim 9, wherein information necessary to categorize each RFID-tagged item may be obtained from a database stored in memory of the RFID reader.

16. The method of claim 15, wherein the database is stored on a removable data storage device.

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17. The method of claim 16, wherein the removable data storage device is a flash memory card.

18. A method of interrogating RFID tags associated with items of interest, comprising the steps of:

(a) selecting at least one category of items using a user interface associated with an RFID reader;

(b) interrogating RFID tags associated with items, at least one of which is within the category of items;

(c) categorizing information related to the at least one item(s) associated with the interrogated RFID tag(s) in at least one of the categories; and

(d) ignoring any RFID-tagged-item that may not be categorized in at least one category.

19. The method of claim 18, wherein the method further includes the step of:

(e) saving the categorized information in a database.

20. The method of claim 19, wherein at least one category describes items of a certain type.

21. The method of claim 19, wherein information necessary to categorize each RFID-tagged item may be obtained from the RFID tag itself.

22. The method of claim 19, wherein information necessary to categorize each RFID-tagged item may be obtained from a database stored in memory of the RFID reader.

23. The method of claim 22, wherein the database is stored on a removable data storage device.

24. The method of claim 23, wherein the removable data storage device is a flash memory card.

25. A method of identifying items associated with RFID tags, comprising the steps of:

- (a) providing a database including entries associated with certain items;
- (b) interrogating RFID tags associated with items; and
- (c) providing an indication to a user when an RFID tag associated with an item that is not on the database is interrogated.

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26. The method of claim 25, wherein the indication comprises illuminating a light source.

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27. The method of claim 25, wherein the indication comprises providing an audible signal.

28. The method of claim 25, wherein the indication is provided on a display.

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29. The method of claim 28, wherein the display is a component of a user interface associated with a portable RFID reader.

30. The method of claim 29, wherein the user interface enables a user to create a database record for the item.

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31. The method of claim 29, wherein the user interface enables a user to enter information into the RFID reader related to the item.

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32. A method of obtaining information related to items associated with RFID tags, comprising the steps of:

- (a) interrogating the RFID tags in an order; and
- (b) organizing the information in an order other than the order in which the tags were interrogated.

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33. The method of claim 32, wherein only information related to RFID-tagged items that are out of position by at least a predetermined amount is organized in the order.

34. The method of claim 32, wherein the method further includes the step of:

(c) comparing the organized information from step (b) with a predetermined ordered list.

35. The method of claim 32, wherein the predetermined ordered list is a list of items in an expected order of location in a storage area.

36. The method of claim 34, wherein the method further comprises the step of:

(d) creating a list of items that are on the ordered list but not among the RFID-tagged items interrogated in step (a).

37. The method of claim 34, wherein the method further comprises the step of:

(d) creating a list of items that were among the RFID-tagged items interrogated in step (a), but are not on the ordered list.

38. A method of obtaining information related to items of interest associated with RFID tags, comprising the steps of:

(a) interrogating RFID tags, each associated with an item, to obtain information related to the items for a purpose other than determining the presence or absence of the items in a storage area; and

(b) using the information for determining the presence or absence of the items in the storage area.

39. A method of obtaining information related to items of interest associated with RFID tags, comprising the steps of:

(a) interrogating RFID tags, each associated with an item, to obtain information for a first purpose of determining whether the items are in a predetermined order within a storage area; and

(b) using information obtained in step (a) for a second purpose of determining the presence or absence of the items in the storage area.

40. A method of obtaining information related to items of interest associated with RFID tags, comprising the steps of:

- 5 (a) interrogating RFID tags, each associated with an item, to determine information related to the items for a first purpose of searching for certain items on a predetermined search list; and
- (b) using the information for a second purpose of determining the presence or absence of the items in the storage area.

10 41. A method of obtaining information related to items of interest associated with RFID tags, comprising the steps of:

- (a) interrogating RFID tags, each associated with an item, to determine information related to the items for a first purpose of checking items into or out of a storage area; and
- 15 (b) using the information for a second purpose of determining the presence or absence of the items in the storage area.

42. A method of reconciling an inventory list of items associated with RFID tags, comprising the steps of:

- 20 (a) using an RFID reader to interrogate at least one RFID tag associated with an item;
- (b) determining whether the item is represented on the inventory list as being present, and if not;
- (c) indicating to a user in real time that the inventory list indicates that the
- 25 item is absent; and
- (d) enabling the user in real time to confirm that the item is present using a user interface associated with the RFID reader.

43. The method of claim 42, wherein the user interface comprises a display.

30 44. The method of claim 43, wherein the display is a touch panel display.

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45. A method of reconciling an inventory list of items associated with RFID tags, comprising the steps of:

(a) using an RFID reader to interrogate RFID tags each associated with an item;

5 (b) determining whether an item represented on the inventory list as being present is among the items whose RFID tags were interrogated, and if not;

(c) indicating to a user in real time that the inventory list indicates that the item is present; and

10 (d) enabling the user in real time to confirm that the item is absent using a user interface associated with the RFID reader.

46. The method of claim 45, wherein the user interface comprises a display.

15 47. The method of claim 46, wherein the user interface comprises a touch panel display.

48. A method of collecting data related to items associated with RFID tags, comprising the steps of:

20 (a) using an RFID reader to interrogate RFID tags, each associated with an item, wherein the items are not arranged or interrogated in an order associated with their desired locations in a storage area;

(b) organizing information obtained from the RFID tags in an order associated with the desired locations of the items in a storage area; and

25 (c) providing the organized information from step (b) to a user.

49. The method of claim 48, wherein step (c) comprises providing information to the user on a display.

30 50. A method of collecting data related to items associated with RFID tags using an RFID reader, comprising the step of enabling a user to alter through a user interface associated with the RFID reader the permissible error tolerance associated with the location of RFID-tagged items interrogated by the RFID reader.

51. The method of claim 50, wherein the method enables the user to alter the permissible error tolerance to make the allowable range of locations smaller.

52. The method of claim 50, wherein the method enables the user to alter the permissible error tolerance to make the allowable range of locations larger.

53. The method of claim 50, wherein the user may alter the permissible error tolerance using a touch-panel display.

54. The method of claim 50, wherein the method further comprises enabling the user to alter the permissible error tolerance by designating a characteristic of the items that is correlated to the proximity of RFID tags in adjacent items.

55. A method of collecting data related to items associated with RFID tags using an RFID reader, comprising the step of automatically altering the permissible error tolerance associated with locations of the items within a storage area based on the number of tags detected within range of the RFID reader at a given time.

56. The method of claim 55, wherein the alteration is proportional to the number of tags detected.

57. A method of converting items from non-RFID-tagged items to RFID-tagged items, comprising the steps of:

- (a) providing a list of items that should not be converted to RFID-tagged items;
- (b) obtaining information from a non-RFID-tagged item to identify the item; and
- (c) determining whether the non-RFID-tagged item is on the list.

58. The method of claim 57, wherein the method further comprises the step of:

- (d) enabling the user to convert the item to an RFID-tagged item by providing an RFID tag associated with that item.

59. A method of converting items from non-RFID-tagged items to RFID-tagged items, comprising the steps of:

- 5 (a) providing a list of items that should be converted to RFID-tagged items;
(b) obtaining information from a non-RFID-tagged item to identify the item;
and
(c) determining whether the non-RFID-tagged item is on the list.

10 60. The method of claim 59, wherein the method further comprises the step of:

- (d) enabling the user to convert the item to an RFID-tagged item by providing an RFID tag associated with that item.

15 61. A method of converting items from non-RFID-tagged items to RFID-tagged items, comprising the steps of:

- (a) presenting a non-RFID-tagged item to a conversion station;
(b) associating an RFID tag with the item; and
(c) determining whether the item presented is in an appropriate location in a storage area compared to an expected order of items in that storage area.

20 62. The method of claim 61, wherein step (b) comprises associating an RFID tag with the item in a database.

25 63. The method of claim 61, wherein step (b) comprises associating an RFID tag with the item in the memory of the RFID tag.

64. A method of converting items from non-RFID-tagged items to RFID-tagged items, comprising the steps of:

- 30 (a) presenting more than one non-RFID-tagged item to a conversion station;
(b) associating an RFID tag with each item; and
(c) taking inventory of the items by comparing the items to a database that includes information indicating whether the items are present.

65. The method of claim 64, wherein step (b) comprises associating an RFID tag with the item in a database.

5 66. The method of claim 64, wherein step (b) comprises associating an RFID tag with the item in the memory of the RFID tag.

67. A method of searching for items of interest that are each associated with an RFID tag, comprising the steps of:

- 10 (a) providing a list of items to an RFID reader;
(b) interrogating an RFID tag associated with at least one item of interest;
(c) comparing information obtained from the RFID tag to the list; and
(d) creating a database record indicating that the interrogated item is on the list.

15 68. The method of claim 67, wherein the database record is a record on a list of items that were on the list.

69. The method of claim 67, wherein the list of items were items that were missing.

20 70. The method of claim 67, wherein the list of items were items that a user wished to check out of inventory.

25 71. The method of any one of the preceding claims, wherein the item(s) are library materials.

72. The method of any one of claims 1 through 70, wherein the items are files.

30 73. The method of any one of claims 1 through 70, wherein the items are pallets or containers.

74. The method of any one of claims 1 through 70, wherein the items are pieces of evidence.

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